

Commissioner for Patents
Reply to Office Action of (April 17, 2007)
Page 5

Serial No. 10/815,826

REMARKS/ARGUMENTS

Paragraphs 5, 16, 19, 20, 26, 30, 39, 40 and 44 have been amended.

Claims 1, 4 and 5 remain pending in the application.

Concerning the initial issues raised by the Examiner, there is an objection to the specification as failing to teach xanthan, starch, and PAC of claim 5.

Applicant respectfully disagrees with the Examiner and believes this objection has evolved from the fact that there are a significant number of trademarks in this case. Applicant has now included information as description for each of the trademarks and has also enclosed Material Safety Data Sheets (MSDS) for each one of the key trademarks used in this case. As the Examiner will appreciate, these Safety Data Sheets clearly indicate the product name, the chemical family, product use and ingredients. Accordingly, it is believed that the teachings in the specification for the polysaccharide gum, starch and polyanionic cellulose are properly defined and supported.

Applicant has also enclosed other public documents, namely the ChonQing, ChangFeng Chemical Co., Ltd. abstract from the website describing polyanionic cellulose specifications and selected materials from the Schlumberger website defining polyanionic cellulose materials and properties thereof. It is believed by the submissions which are publicly available that the objection to the specification as being insufficient to convey relative information to the skilled inventor is now overcome. The amended pages delineate the ingredients of the trademark entries. The Examiner's reconsideration on this point is respectfully requested.

Turning to the further rejections under 35 U.S.C. 112, the Examiner has indicated that the specification is limited to diesel and hydrogenated naphtha as the hydrocarbon solvents. There is also the allegation that one of ordinary skill would require significant experimentation to determine which aliphatic hydrocarbons would be useful in the present invention.

Applicant respectfully disagrees with the Examiner. There is an indication in the text of the application as filed that HT-40N, diesel and DMO 100 were tested as possible solvents for the fluid. In the case of the HT-40N, this is a mixture of hydrotreated and hydrocracked base oil and is therefore a hydrocarbon material. In its specific examples, applicant provides in experiment 7, under article 30, that:

"In order to find the best tar remover, over 50 products were tested at various concentrations. Q'Clean™ was selected as the best tar remover."

Commissioner for Patents
Reply to Office Action of (April 17, 2007)
Page 6

Serial No. 10/815,826

Q'Clean as is indicated in the enclosed MS-DS information comprises a mixture of petroleum hydrocarbons. The Examiner will note that in Experiment 8, paragraph 35 discloses the fact that the Q'Clean again was used as the hydrocarbon solvent and then provided very satisfactory results. Further to this end, paragraph 39 in the specification as filed indicates what the PolyTar system included; once again Q'Clean is part of the system that was used as the drilling fluid. In view of this fact, it is believed that there is adequate support for the terminology aliphatic hydrocarbon solvent in the claims. Q'Clean is known to be a mixture or blend of various aliphatic hydrocarbons. Reconsideration is respectfully requested.

Turning to the rejections under 35 U.S.C. 102, the Examiner has stated that claims 1 and 4 are anticipated by the Weaver reference, United States Patent No. 6,488,091. The Examiner has taken the position that Weaver provides a composition which can comprise a polysaccharide and diesel in the amounts within the scope of the present invention. An enzyme breaker is also included in the Weaver reference.

Applicant has refuted the Weaver reference and the same relates to a fracturing fluid which is used to increase the permeability or conductivity of subterranean formations penetrated by wellbores. Applicant is using its formulation under completely different circumstances. Evidence of this can be gleaned from the disclosure of Weaver, particularly at column 6, beginning at line 51, wherein it is indicated:

"Another additive which can be included in the concentrate is a surfactant for preventing the formation of emulsions between the treating fluid which is formed with the concentrate and the subterranean formation fluids."

This is also taught in column 9, beginning at line 60, wherein it is indicated:

"The treating fluid as well as the concentrate can also include a surfactant for preventing the formation of emulsions between the treating fluid and the subterranean formation fluids contacted by the treating fluids".

Further teachings to this effect are also indicated in column 12, beginning at line 15. Applicant submits that the teachings of Weaver are, in fact, exactly opposite to what applicant wishes to achieve. Applicant's goal is stipulated on page 6 of the application as filed, beginning at paragraph 28 where the idea is to create an emulsion by virtue of the polysaccharide polymer aliphatic hydrocarbon and other components in the mixture to create a loose emulsion of the oil as fine drops within the emulsion and subsequently de-emulsify the emulsion to separate or release the oil from the emulsion, thereby freeing the same of sand and water to make a saleable product. It is important to note that in applicant's arrangement an emulsion is desirable for formation, since it provides the mechanism of

Commissioner for Patents
Reply to Office Action of (April 17, 2007)
Page 7

Serial No. 10/815,826

action for the separation in this drilling fluid. Applicant has added some clarifying language to independent claim 1 and this language has been directly taken from the specification as filed and is therefore fully supported and does not constitute the addition of new subject matter. In reviewing the Weaver et al. disclosure, there is no discussion of formulating an emulsion having water as the external phase and the aliphatic hydrocarbon as the internal phase of the emulsion having oil disbursed therein. It is believed that there is a significant difference between what is taught in the instant application compared to that which is indicated in the Weaver et al. reference. The Examiner's careful reconsideration is respectfully requested.

Turning to the rejections on 35 U.S.C. 103, the Examiner has stated that claims 1 and 4 are unpatentable over Mondshine (United States Patent No. 4,619,776).

The Examiner has stated the position that Mondshine provides a well treating fluid which comprises a polysaccharide and diesel in the amounts claimed in the present case. The Examiner acknowledged the fact that Mondshine fails to provide the specific amount of enzyme breaker noted in this application, but makes the point that it would be obvious to one of ordinary skill in the art to utilize varying concentrations of enzyme breaker in the invention of Mondshine in order to regulate the speed of breaking the composition therein.

In terms of Example 8, this example does not provide for any solvent action for the method of preparation of the fluid. The chemistry described in this reference not only differs in nature but does not relate to the claims currently presented. The fracturing fluid properties have been noted in the Weaver reference. In the Mondshine reference, the fluids are indicated to be of enhanced temperature stability and contain boron crosslinked galactomannan polymers and methods of producing the same. All through the disclosure of Mondshine there is no specificity concerning the enzyme breaker and, in fact, in column 9 beginning at line 50, there is a generic description of the fracturing fluid containing other possibilities for fluid loss control additives. The fact that there is no specificity concerning the enzyme based breaker speaks to the fact that Mondshine did not create a drilling fluid which is used to emulsify a high viscosity tar sand formation. There is no discussion concerning the formation of an emulsion for subsequent de-emulsification for release of the trapped oil values.

It is submitted that Mondshine is deficient not only in the fact that there is no emulsification, but further in that the compounds listed in the amended claims presented

Commissioner for Patents
Reply to Office Action of (April 17, 2007)
Page 8

Serial No. 10/815,826

herein are performing completely different functions than those in the Mondshine reference where these compounds are present.

The Examiner makes the point that the specific amount of the enzyme breaker would be obvious to one skilled in the art. Applicant respectfully disagrees. The fact that this case contains significant amounts of data is illustrative of the fact that experimentation was required to determine the optimum quantity for each of the compounds listed and for this reason such amounts are clearly not obvious.

Concerning the Examiner's point regarding the trademarks, this has been addressed previously herein; the enclosures overcome this objection.

In view of the amendments made to the application and the newly presented claims, it is believed that the independent claim and the claims dependent thereon now define patentable subject matter over each of the references cited in this application.

Reconsideration of this application is respectfully requested.

Respectfully submitted,

By: 

Paul Sharpe
Registration No. 39,493
Attorney for Applicant

PSS/all

Address: Ogilvy Renault, LLP
1981 McGill College Avenue
Suite 1100
Montreal, Quebec
H3A 3C1 Canada